

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(iii) NUMBER OF SEQUENCES: 23

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene

(B) LOCATION: 17p13.1

(D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

1
ggcctcccaa agtgctggat tacaggcgtg agtcaccgcg cctgggtcccc tgtcttcttt
61
aagaaagctc agcggacctt tttccttctt ggggtggaac aaaaagccaa atctagcaca
121
accctgggca ggggcccaga atcactggaa gcaaagggtg atgggatagg aggcgaggct
181
gcctgtggac cacaggcccc gcccagagtgg ctctgatgag aagccggggc gcctaggtca
241
ccgccccac cgtctgccct tccccccact cctcctggct gggtaaatacc cagagtctca
301
gccgcctaag tgtcttcccc ggaggtgaga ttatctccgc ctgtgctgga cacctccctt
361
tctcctgcag ccatggatgc cgctctgctc ctgaacgtgg aaggggtcaa gaaaaccatt
421
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481
cctccggagc agacagggtc cccacagca gctttcaaca ttccaggtgt gcccgaaggc

541
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601
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781
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841
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1321
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15 1981
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 2821
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 2941
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6601
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6661

ctggagctta gcctgagagg ggttcttgc

6689

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1119 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **Baboon**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

atggatgccg ctctgctcct gaacgtggaa ggggtcaaga aaaccattct gcacggaggc
acgggcgagc tcccaaactt catcacgga tcccgagtga tctttcattt ccgcaccatg
aaatgtgatg aggagcgcac ggtcatcgac gacagccggc aggtggacca gcccatgcac
atcatcatcg ggaacatggt caagctcgag gtctgggaga tcctgctcac ctccatgagg
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gattaccaga gggagacctg gaacctgagc aatcatgaga agatgaaggt ggtgcccgtc
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ctgcgctgcc ggaacatgct gagccaggga gccacgcagc ctccacaga gccaccggca
gagccccaca cagcaccacc tgcggagctg tccacagggc cacctgcaga gccacccgca

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 acgctgggctacgaggacctggacgagctgcagaaggagcctcagccactgatcttcataatcga
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 aaaaaaaaaaaaaattttt

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA *Dog*

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

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 acaacgaaatgcgacgaggcgcgacagtgatcgacgacagcaagcgtgtgggcatcccatgca
 catcatcatcgggaacatgttcaagctggaggtctgggaggtgctgctgacatccatgcgcgtgg
 gcgaggtggccgagttctggtgcgactctattcacacaggagtctaccccatcctgtcccggagc
 ctgcggcaggtggcggaggggaaggacccactgagtggcatgtacacacgtgcggcttggccaa
 catgtttgcctatcacacgctgggctacgaggacctggacgagctacagaaggagccgcagcccc
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tgccggaacatgcta

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA *mouse*

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene

(B) LOCATION:

(D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

atggacgtctctctactcctcaatgttgagggtgtcaagaagaccattctgcatgggggggacagg
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aagaacgcacggtgatcgatgacagcaagcaggtgggcccagcccatgagcatcatcatcggcaac
atgttcaagctggaggtgtgggagacgctgctgacctccatgcggtggtggcgaggtggctgagt
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cagcactga

5

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

10

(ii) MOLECULE TYPE: cDNA *Squirrel monkey*

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

15

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aggagcggacggtgattgacgacagcagggaggtgggcccagcccatgcacatcatcatcggaac
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cacagagccacccgcagagccacctgcagagccacctgcagagctaaccttgacccccggggcacc
cactacagcactga

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Met79Thr Mutation
- (B) LOCATION: 77...81
- (D) OTHER INFORMATION: Thr 79 mutation

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

acc tcc acg cgg gtg

15

Thr

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Trp88X mutation
- (B) LOCATION: 86...90
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

gag ttc tga tgc gac

15

X

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Val96Ile mutation
- (B) LOCATION: 94...98
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

acg ggg atc tac ccc
Ile

15

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Thr124Ile mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

gac ccc ata gag tgg
Ile

15

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Pro376Ser mutation
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
cca ccc tcg tcc cca
Ser

15

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Gln163X mutation
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
gat tac tag agg gag
X

15

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Ala197Pro mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gag gag ccc tct tcc
Lys

15

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Trp278X mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

gag gtg tga aat gag
X

15

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS2-2A->G mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

tcc cca cgg cac acg

15

IVS2-SA->G

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Glu262Ser mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

cac cca agt gcg cgg
Ser

15

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Arg302Leu mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

gcg gtg ctc agg gag
Leu

15

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Pro351del12 mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

g cca ccc aca gca
del TGCAGAGCCACC

13

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Cys239Arg mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

tgc cag cgc ctg ctg
Arg

15

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:
gat att cac cca
del CTCCGGCAC

12

5

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Val33ins8 mutation
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

gac tag gtg atc ttg tga tct
ins GTGATCTT

10

15

20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS1-9G->A Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

CTC AGT GAC TAG

25

30

G->A

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2+66G->C Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

TTT GCC GGG CTG
G->C

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-88C->T Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

TCC TCT CAG GAG
C->T

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-14G->A Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATC CAT TTA TCC
G->A

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-10A->C Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

CGT TTC TCC CCA
A->C

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS3-25T->C Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CTG CCC CAC TGA
T->C

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS3-21T->C Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

CCT CAC CGA CCT
T->C

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid

5

10

15

20

25

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Sequence File

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 IVS5+18G->A Benign
Variants/Polymorphisms
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:
AGG AGC GGA CAG
G->A

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Asp90His Benign
Variants/Polymorphisms
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:
TGG TGC CAC ACC
His

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 Phe37Phe Benign
 Variants/Polymorphisms
 (B) LOCATION:
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:
 CAT TTC CGC ACC
 Phe

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Ser78Ser Benign
Variants/Polymorphisms
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

ACC TCT ATG CGG
Ser

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Cys89Cys Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

TGG TGT GAC ACC

Cys

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Leu100Leu Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

ATC CTG TCC CGG

Leu

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 His172His Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

AAT CAC GAG AAG

His

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Pro217Pro Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

AAG CCG TGG GAG

Pro

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Asp255Asp Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:
AGT GAC ATT CTC
Asp

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

5'-AAGAAAACCATTTCTGCACGG-3'

20

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

5'-TGCAGCTCGTCCAGGTCCT-3'

19

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

5

- (A) LENGTH: 17 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

5'-GACACCTCCCTTTCTCC-3'

17

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

5'-GCTGGGGCTGCCTGGCTG-3'

18

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

30

(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:
5'-CCGAGTGATTACCAGAGGGA-3' 20

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:
5'-TGAGCTCCAGCACCTCATAG-3' 20

(2) INFORMATION FOR SEQ ID NO:48:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:
5'-ACGCAGAGGTGTGGAATG-3' 18

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

5'-AAAAAGTGACACCACGATC-3'

19

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene exon/intron donor splice site
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

CGGATCCCGAgtgagtggggccctccggagcaga

34

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: cDNA
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Acceptor
 splice site
 (B) LOCATION:
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:
 cagagtgcaccgtctcggtgactagGTGATCTTTC 35

(2) INFORMATION FOR SEQ ID NO:52:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 35 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: DNA (genomic) human
 (ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Donor splice
 site
 (B) LOCATION:
 (D) OTHER INFORMATION:
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:
 CSACACCATCgtaagtaggcacctgcgcgcctgtct 35

(2) INFORMATION FOR SEQ ID NO:53:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 35 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: DNA (genomic) human
 (ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Acceptor

splice site
(B) LOCATION: 17p13.1
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:
gccatccatccgtttatccccacagCACACGGGGG

35

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 35 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice
site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

GCTGCTGCAGgtggggctgggggttggcagggctgg

35

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor
splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

cactgacctgcagctctgtggggccagGTTGATGCCC

35

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

GCAGACCAAGgtcagaggccgctggccacgggggtg

35

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

catggctgaccttctccctgggcagGAGAAGCCRT

35

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

CACCACCCAGgtgctgcgcggggctgcaggggcggaca 35

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

gctggatgctccctgctccccacagGCATCGTGAA 35

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 1 Primer
(B) LOCATION: 240
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:
5'-ggacacctccctttctcc-3'

18

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 1 Primer
(B) LOCATION: 240
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:
5'-gctggggctgcctggctg-3'

18

(2) INFORMATION FOR SEQ ID NO:62:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 2 Primer
(B) LOCATION: 297
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

5'-gggccttgaacagtgtgtct-3'

20

(2) INFORMATION FOR SEQ ID NO:63:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 2 Primer

(B) LOCATION: 297

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

5'-tttccccgaaacacagcagc-3'

19

(2) INFORMATION FOR SEQ ID NO:64:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 3 Primer

(B) LOCATION: 364

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

5'-agtgagggagcaggattc-3'

18

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 3 Primer
(B) LOCATION: 364
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

5'-tgcccatgatgcccgctgtc-3'

20

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 4 Primer
(B) LOCATION: 315
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

5'-tttcgggtctctgatggg-3'

18

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 4 Primer

(B) LOCATION: 315
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:
5'-gcaggctccccagagtc-3'

17

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer
(B) LOCATION: 279
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

5'-gcagctgcctcagggtcatg-3'

19

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer
(B) LOCATION: 279
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

5'-gtggggtggaaagaaaag-3'

18

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

5'-ctgggaaggagctgtag-3'

18

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

5'-aaaagtgacaccacgatcc-3'

19

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Human** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

5 MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDE
ERTVIDDSRQVGQPMHIIIGNMFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSR
SLRQMAQGKDPTTEWHVHTCGLANMFAYHTLGYEDLDELQKEPQPLVFVIELLQVDAPS
DYQRETWNLSNHEKMKAVPVLHGEGNRLFKLGRYEEASSKYQEAIICLRNLQTKEKPW
EVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHHPGIVKAYYVRARAHAE
10 VVNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLXCRNMLSQGATQP
PAEPPTPEPPAQSSTEPPAEPPTAPSAELSAGPPAEPATEPPPPSPGHSLOH

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Chimpanzee** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVGQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTTEWHVHTCGLANMFAYH
25 TLGYEDLDELQKEPQPLVFVIELLQVDAPSDYQRETWNLSNHEKMKAVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVVNEAEAKADLRKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPAEPPTPEPPAQSSTEPPAEPPPAPSAELSAGPPAETATEPPPPSPGHSLOH

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(ix) FEATURE:
(A) NAME/KEY: **Baboon** Aipl1
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKKEPWEVQWLKLEKMINTLTNLNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPTEPPAEPHTAPPAELSTGPPAEPPELPLSPGHSLQH

(2) INFORMATION FOR SEQ ID NO:75:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(ix) FEATURE:
(A) NAME/KEY: **Cow** Aipl1
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

MDATLLLNVEGIKKTILHGGTGDLPNFITGARVTFHFRTMKCDEERTVIDDSKQVGHPMHIIIGN
MFKLEVWEILLTSMRVSEVAEFWCDTIHTGVYPILSRSLRQMAEGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFIIELLQVEAPSQYQRETWNLNQEKMQAVPIILHGEGNRLFKLGRYE
EASNKYQEAIIVCLRNLTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLEKLVLELEPSMRKAVQRELRLLENRLEEKREEERLRCRN
MLG

(2) INFORMATION FOR SEQ ID NO:76:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Mouse** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

MDVSLLLNVEGVKKTILHGGTGELPNFITGSRVTFHFRTMKCDEERTVIDDSKQVGQPMSEIIIGN
MFKLEVWETLLTSMRLGEVAEFWCDTIHTGVYPMLSRSLRQVAEGKDPTSWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLVFLYELLQVEAPNEYQRETWNLNNEERMQAVPLLHGEGNRLYKLGRYD
QAATKYQEAIVCLRNLTKEKPWEVEWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYMRARAHAEVWNAEEAKADLEKVLELEPSMRKAVLRELRLLESRLADKQEEERQRCRS
MLG

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Rhesus Monkey** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIIICLRNLQTKKPWEVQWLKLEKMINTLTILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPAEPPAQPTAPPAELSTGPPADPPAEPPTAPPAELSTGPPAEPPAELPLSPGHSLQH

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: *Squirrel Monkey* Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSREVGQPMHIIIGN
MFKLEVWEILLTSMRVREVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKKEPWQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATWSPAEPPEPPAESSTEPPAEPPAEPPAELTLTPGHPLQH